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ABSTRACT

A determination was made of whether any change occurred in the self-concept of children in the open space environment as compared to the change of self-concept of children in a self-contained environment. A total of 216 children, part from an open space environment school and the others from self-contained classrooms at grade levels with one teacher per grade level, were administered the Self-Social Symbols Tasks and the Children's Self-Social Constructs Tests. From the data collected, it was concluded that: 1) children in open space have greater identification with the group than the children in self-contained classrooms; 2) children in open space have an increase in self-esteem while children in self-contained classrooms demonstrated a loss; 3) children in open space do not view themselves differently in the relationship of their size to that of an adult; and 4) children in open space do not identify with any one particular teacher. (LH)

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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Laboratory School

A COMPARATIVE STUDY OF SELF-CONCEPT: OPEN SPACE VERSUS SELF-CONTAINED CLASSROOMS

Research Study Number Four

Norman Louis Heimgartner

Laboratory School

Spring

1972

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ABSTRACT

Heimgartner, Norman Louis. "A Comparative Study of Self-Concept: Open Space Versus Self-Contained Classrooms." Unpublished Research, University of Northern Colorado, Laboratory School, 1972.

The chief purpose of this study was to determine whether any change occurred in the self-concept of children in the open space environment as compared to the change of self-concept of children in a self-contained environment.

The population for this study was from two sources: The Laboratory School at the University of Northern Colorado and one school from School District Six, Greeley, Colorado.

The children at the Laboratory School are housed in an open space environment. The children of the Control Group of School District Six were housed in self-contained classrooms at grade levels and with one teacher per grade level. Two hundred sixteen children were administered the Self-Social Symbols Tasks and the Children's Self-Social Constructs Tests. As a result of the testing it was found that:

1. The Laboratory School children had a significant rise in individuation. The Control Group proceeded to have less identification.
2. Both groups gained in complexity. It appears that the

complexity of self is enhanced by the child's exposure to a diversed group of adults.

3. Both groups made gains in dependency or social interest. The Laboratory School children had strong group identification and the Control Group children do not have as strong a group identification.
4. The Laboratory School group had an increase in self-esteem over the year while the Control Group demonstrated a slight loss.
5. The Laboratory School children do not view themselves differently in the relationship of their size to that of an adult. The Control Group appears to be more realistic in the relationship between the physical self and the conception of self.
6. The identification with mother for the Laboratory School group was fairly constant throughout the year. The Control Group had a noticeable shift in closer identification with the mother.
7. The post-test of the Laboratory School and the Control Group demonstrated a closer shift to the father than earlier in the year.
8. The Laboratory School children do not identify with any one particular teacher.

9. The Laboratory School children identify with friends less than the children of the Control Group.
10. A gain was made in preference of father in both groups on the post-test.
11. The Laboratory School children demonstrated a greater preference for mother than did the children of the Control Group on the post-test.
12. There was less preference for teacher on the post-test for both groups of children.
13. There was less preference for friends on the post-test for both groups of children.

From the data collected, the following conclusions may be drawn:

1. Children in open space have greater identification with the group than the children in self-contained classrooms.
2. Children in open space had an increase in self-esteem while children in self-contained classrooms demonstrated a loss.
3. Children in open space do not view themselves differently in the relationship of their size to that of an adult.
4. Children in open space do not identify with any one particular teacher.

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CHAPTER I

NATURE AND SCOPE OF THE STUDY

Introduction

The open space school presents a flexible arrangement of facilities, providing an instructional area or series of such areas without any interior walls. It is a seamless structure. Many educators maintain that this openness of the environment is an enabling factor which will optimize opportunities for individuality of learning and stimulate teachers to plan and work creatively in cooperation with other teachers.

According to Spodek:

> Open education is diffcult to define. It does not adhere strictly to any single dogma. In open education learning takes place as a result of an individual's encounter with his environment. In an open educational environment there is no single way to master a concept or learn a skill. In an open classroom there is more than inquiry learning taking place.[1]

Research has shown that children and parents like the open space environment.[2]

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[1]Bernard Spodek, "Open Education," Peabody Journal of Education, XLVIII (January, 1971), 140-46.

[2]Norman L. Heimgartner, "Parent and Children Attitudes Concerning the Open Space Concept" (unpublished research, University of Northern Colorado, 1971).

It appears that the first few years of life are critical to the child's educational development. Further, the beginning school experience may have a profound effect upon the school life of the child. It is the environment and program that the school offers that will encourage and challenge the child.

According to Nimnicht, Meier, and McAfee,

> There is little doubt that the years from two to five are crucial years in the intellectual development of the individual. The environment plays a dominant role in the development of the child and the more closely the environment approaches optimum conditions, the more likely the child is to realize his potential.[1]

The ungraded continuum concept which includes kindergarten through grade five without regard for grade designation has evolved as a method of gearing the school program more readily to the needs of the individual child.

The open space environment should be recognized as an organizational scheme, not an instructional device. But it is in this open space that children have an opportunity to interact with children of different age groups and with different teachers.

According to Ames, "The growing child, like the growing plant, needs a supporting and favorable environment."[2]

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[1]Glen Nimnicht, John Meier, and Oralie McAfee, "Nursery School Education Today," Journal of Research Services, VI, No. 2 (Colorado State College, May, 1967), 33.

[2]Louise Bates Ames, Child Care and Development (J. B. Lippincott Company, 1970), p. 14.

The Primary and Intermediate Continuum of the Laboratory School at the University of Northern Colorado (Greeley) replaced the traditional Kindergarten, Grade One, Grade Two, Grade Three, Grade Four, and Grade Five. Prior to September, 1969, the primary level of the Laboratory School had self-contained classrooms. During the summer of 1969, the walls between the Kindergarten, Grade One, and Grade Two were removed to allow a seamless open space area. In this open space area are housed a student population of seventy-seven: twenty-five at age five, twenty-six at age six, and twenty-six at age seven.

During the summer of 1970, the walls between Grade Three, Grade Four, and Grade Five were removed to create an Intermediate Continuum. In this open space are housed eighty students: twenty-six at age eight, twenty-eight at age nine, and twenty-six at age ten.

During the past decade, emphasis has been placed upon open space concept, non-gradedness, and team teaching. It has been demonstrated that children are capable of doing more than what was expected of them in the past.[1] From observations of parents and teachers it appears that children are happier and more independent in the open space environment than in self-contained classrooms.

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[1]Norman L. Heimgartner, "Selected Mathematical Abilities of Beginning Kindergarten Children" (unpublished doctoral dissertation, University of Northern Colorado, Winter, 1968).

As more and more is learned concerning children and their interaction with the classroom environment, programs must be re-evaluated. It is only then that an effective curriculum can be developed for the appropriate maturation levels of children.

The Problem

The chief purpose of this study was to determine whether any change occurred in the self-concept of children in the open space environment as compared to the change of self-concept of children in a self-contained environment.

Importance of the Problem

There may be an indication that much of the learning prior to beginning school takes place in the home environment. It is in this environment that social stimulation is heightened and the child becomes aware of objects about him. He learns from his own observation and experimentation. Thus each child brings to the school situation a different background of experiences and different abilities for learning in an environment.

Therefore, it would appear that the school environment has an effect upon the self-concept of the child. The child's self-concept, in turn, affects his performance levels and learning capabilities.

Delimitations

The population for this study was from two sources: the Laboratory School at the University of Northern Colorado and one school from School District Six, Greeley, Colorado.

The children at the Laboratory School (Kindergarten through Grade Two) are housed in an open space environment. The upper population (Grade 3) taking the Primary Form are housed in an open space environment (Grade 3 through Grade 5) on a different floor.

The control group of District Six consisted of Grades Kindergarten through Grade Three. Each grade level was in a self-contained classroom with one teacher.

Definitions

The term "self-contained classroom" is used in this study to represent a structure which houses approximately thirty-five children at a particular grade level for purposes of instruction for which one full-time professional teacher is responsible.

The term "open space" is used in this study to represent a seamless structure at the Laboratory School which houses seventy-eight children, ages five, six and seven, for purposes of instruction. This area was staffed by three full-time professional teachers, three half-time interns, and one full-time paraprofessional.

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CHAPTER II

REVIEW OF RELATED RESEARCH

The major purpose of a study by Kaelin was to determine what operationally engaged teachers and principals perceived to be the advantages and disadvantages related to certain aspects of teaching and learning in open space elementary schools.[1]

The sample consisted of 243 teachers and 17 principals. He found that children have many opportunities for independent work, and individualizing of instruction is facilitated in the open space schools. However, in the open space environment, teachers evidenced dissatisfaction about problems of supervision.

He did report that children have many more opportunities in open space to associate with their peer groups than did children in self-contained classrooms.

Conditions within the physical environment (openness, movement, noise level, lack of privacy) produced little or no negative effects upon children.

Teacher reaction toward working in teams was highly positive. Also, attitudinal changes of teachers which occurred

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[1]William C. Kaelin, "Open Space Schools: Advantages and Disadvantages As Perceived by Teachers and Principals in Selected Open Space Schools" (unpublished doctoral dissertation, Florida State University, 1970).

over the course of the school year were all in a positive direction.

The purpose of a study by Warner was to determine the effect of an open space facility, as compared with a self-contained classroom, upon the performance of students and teachers in an elementary school.[1]

From this study it was concluded that one type of facility was not superior to the other. It was evident from this research that the open space facility can accommodate the same type of program as successfully as the self-contained classroom facility.

Teacher and pupil performance were equal and similar when academic achievement, teacher-pupil verbal interaction, and the teachers' perceptions of the organizational climate were compared.

Warner found that an advantage of the open space area was the flexibility of the facility. Teachers took advantage of the space and spent significantly greater periods of time with small and large instructional groups. Teachers in self-contained classrooms tended to spend a greater proportion of their time with medium size instructional groups.

The teachers in the open space area also tended to use

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[1]Jack Bruce Warner, "A Comparison of Students' and Teachers' Performances in an Open Space Facility and in Self-Contained Classrooms" (unpublished doctoral dissertation, University of Houston, 1970).

more supplementary instructional materials than did the teachers in self-contained classrooms.

Austin investigated the main objectives of sixty-one schools in Park Forest, Illinois. All of the schools were nongraded at the time of the study.[1] The main objectives reported for the ungraded unit were providing for individual differences, providing for continuous uninterrupted progress, releasing children from strain and tension, and eliminating failures and needless repetitions.

As a result of thist study, Austin concluded that study, planning, and discussion should precede the starting of an ungraded unit. A continuous analysis should be carried on to assure every child the advantages of the gradeless program. Complete assignment flexibility should be maintained to allow movement of individual pupils from group to group as the situation warrants.

The chief purpose of a study by Heimgartner was an evaluation of the continuum concept by pupils and by parents.[2] The instrument for the study was a questionnaire.

The Primary Continuum has been in operation for a year and a half. The Intermediate Continuum has been in operation for six months. Reactions to the environmental change have been

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[1]Kent Austin, "The Ungraded Primary Unit in Public Elementary Schools of the United States" (unpublished doctoral dissertation, University of Colorado, 1957).

[2]Heimgartner, "Parent and Children Attitudes."

expressed to the staff, but there had been no attempt to solicit the reactions of students and parents. An evaluation of the continuum concept was desired.

From the data collected, the following conclusions were drawn:

1. The open space concept was favorably received by pupils and parents.
2. Noise in the area bothered many children.
3. Children received greater stimulation to learn in the open space concept.
4. Children indicated they could not go as fast in reading as they would like but could go as fast as they liked in mathematics.
5. Children and parents preferred having more than one teacher during the school day.
6. Parents preferred the conference method.
7. The Laboratory School needs better means of communications with parents.
8. Parents were satisfied with the learning environment of their children.
9. Parents and students were pleased with the relaxed atmosphere of the open space facility.

Summary

The research indicated that individualizing of instruction is facilitated in the open space schools. Children do have greater opportunities for social interaction in open space areas.

It has been indicated that one type of facility is not superior over another type when academic achievement is compared.

Teachers in open space areas make greater use of supplementary materials. These same teachers tend to spend greater periods of time with small groups for purposes of instruction.

Parents and children indicated they liked the open space areas and the open space concept.

The research presents opposing viewpoints as to the toleration of noise in the areas. It was demonstrated that one sample was not bothered by noise and another sample was very concerned with the noise level and movement in the area.

CHAPTER III

PROCEDURE

Selection of the Population

All the children in the Primary Continuum and the Intermediate Continuum were utilized (N =103) for the purpose of administering a test of self concept. The five-year-old group were completing their first year in school. The six-year-old group were completing two years in an open space area and had no self-contained classroom experience. The seven-year-old group had one year of self-contained classroom experience (kindergarten) and two years of open space classroom experience. The eight-year-old group had two years of self-contained classroom (kindergarten and grade one) and two years of open space environment. The nine- and ten-year-old groups are completing their first year in the open space area and had three and/or four years of self-contained classroom experience.

School District Six of Greeley, Colorado, cooperated in this study. A school containing all self-contained classrooms was selected as the control group. As far as could be ascertained, none of the children in the control group (kindergarten through grade five) had had experience in an open space environment.

The Primary Form of the test was given to children in the Primary Continuum area and the first level of the Intermediate Continuum. In the control group, kindergarten, grade one, grade two, and grade three received the Primary Form. The test was administered twice. The pre-test was given in October for the Laboratory School and the Control Group. The post-test was administered in May for the Laboratory School and the control group. Table 1 represents the sample of the Primary Form given at the Laboratory School for the pre-test and the post-test.

TABLE 1

LABORATORY SCHOOL PRIMARY FORM

Group	Pre-test		Post-test	
	Boys	Girls	Boys	Girls
Lower Primary Continuum	11	13	11	13
Middle Primary Continuum	11	14	11	14
Upper Primary Continuum	15	11	15	11
Lower Intermediate Continuum	12	14	12	14

Table 2 represents the sample of the Primary Form given for the Control Group.

TABLE 2

CONTROL GROUP PRIMARY FORM

Group	Pre-Test		Post-Test	
	Boys	Girls	Boys	Girls
Kindergarten	13	16	13	16
Grade One	14	13	14	13
Grade Two	15	13	15	13
Grade Three	14	15	14	15

The primary Form was administered to groups of five children at a time in the Lower Primary Continuum at the Laboratory School. The Primary Form was administered to groups of five children at a time in the Control Group. The administrator of the examination was a University of Northern Colorado student who had no connection with the Laboratory School or District Six. The administrator was not known by any of the children in either group. The test was administered in one sitting. The same procedure and administrator was used for the pre-test and post-test.

The remaining children using the Primary Form were administered the examination in large groups by age levels or by grade levels. The examination was administered in one sitting. The same procedure and administrator was used for the pre-test and post-test.

The Adolescent Form was administered at one sitting to the Middle and Upper Intermediate Continuum children. The same administrator and procedure was used for the pre-test and post-test. Table 3 represents the sample for the Adolescent Form at the Laboratory School.

The Adolescent Form was administered to Grade Four and Grade Five of the Control Group. The same procedure was followed for the pre-test and the post-test. Table 4 represents the sample taking the Adolescent Form in the Control Group.

During the testing sessions, the regular staff teachers were not involved and they were occupied in other areas of their buildings.

TABLE 3

LABORATORY SCHOOL ADOLESCENT FORM

Group	Pre-Test		Post-Test	
	Boys	Girls	Boys	Girls
Middle Continuum	13	13	13	13
Upper Continuum	12	13	12	13

TABLE 4

CONTROL GROUP ADOLESCENT FORM

Group	Pre-Test		Post-Test	
	Boys	Girls	Boys	Girls
Grade Four	15	14	15	14
Grade Five	14	14	14	14

Instrument Used

The instrument used for this study was the Self-Social Symbols Tasks and the Children's Self-Social Constructs Tests. These tests were authored by Dr. Barbara H. Long, Dr. Edmund H. Henderson, and Dr. Robert C. Ziller.

The self-social symbols is an approach to the problem of measuring the self-concept. In this approach, the testee is presented with a booklet containing a series of symbolic arrays in which circles and other figures represent the self and/or people of importance. The testee responds to each task by selecting a circle or a figure to represent the self or some other person from among those presented. From these arrangements certain aspects of the person's conception of himself are inferred.

A number of theoretical assumptions are required in order to have inferences made. The first assumption is that it is possible for a person to communicate his self-social schemata non-verbally. A second assumption basic to this approach is that the particular spacial arrangements made by the subjects in the tasks are interpretable. A third assumption of this approach is that a non-verbal response will often reveal a clearer picture of the person's self-conceptions than will a verbal response. A fourth assumption is that a number of different aspects of self-other relations are observed. All the scoring is objective, permitting the use of statistical techniques.

There are two forms of this measurement used: the Primary Form and the Adolescent Form. Tasks for self-esteem, social interests, identification with particular others, individuation, and complexity appear in both forms. The tasks for group identification, egocentricity, and power are found only in the Adolescent Form.

Self-esteem.--"Self-esteem is thought to be a person's perception of his worth."[1] There are two tasks to measure self-esteem. These are (1) vertical esteem and (2) horizontal esteem.

The vertical esteem task has a column of circles which represent children. The testee selects one to be himself. In the Primary Form for horizontal esteem, six circles are arranged in a horizontal row. The child selects one to be himself.

In the Adolescent Form, there are provided six stimulus persons (including self) for the six circles. The testee arranges these persons in the circles, with each person assigned to a single circle.

Social interest or dependency.--"Social interest or dependency is thought to be the degree to which a person perceives himself as a part of a group of others, as opposed to a perception

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[1]Barbara H. Long, Edmund H. Henderson, and Robert C. Ziller, Manual for the Self-Social Symbols Tasks and the Children's Self-Social Constructs Tests (n.d.), p. 10.

of the self as an individual."[1] The task consists of three circles representing people arranged at the apexes of an imaginary equilateral triangle. The testee draws a circle representing him on a page. Placement within or in the vicinity of the triangle is interpreted as social interest or dependency.

Identification.--"The identification of the young child with his parents is the basis of socialization as well as of the development of a functional self-concept."[2] In these tests separate tasks are presented for identification with mother, father, teacher, and friend. Each of these tasks consists of a row of circles, with the left end circle representing a particular other person. The testee is asked to select one of the other circles to represent the self.

Group identification.--"The breadth or inclusiveness of identification is believed to involve a mapping of the social field in which persons are placed in classes or groups that do not include the self."[3] In the adolescent test form this aspect of identification is measured by a grouping task. The testee is presented with a list of particular other persons and the self. He is asked to group them in any way he likes, including each person only once. The numbers of persons placed with self indicates the breadth of identification.

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[1] Ibid., p. 12. [2] Ibid., p. 13. [3] Ibid., p. 14.

Individuation, or minority identification.--"These terms are used to describe a single idea--whether the person thinks of himself as similar to or different from other persons."[1] The testee is presented an array of circles, a majority of one kind. The testee chooses a symbol to represent the self from an array including one of each kind at the side of the page.

Power.--"A power dimension in self-social relations may be described as a conception of the self as consistently superior, equal, or inferior to specific other persons."[2] The testee is presented with a diagram, in which a semicircle of small circles appears around a central circle which represents the self. The task is to select one of the remaining circles to represent a particular other person.

Egocentricity.--"Egocentricity is interpreted as a tendency to focus upon the self or upon others. Egocentricity, or perceiving the self as 'figure' rather than 'ground', is considered to be a directing or attention toward the self to the exclusion of others, and to represent a somewhat neurotic pattern if present to a marked degree."[3] The testee is presented with a large blank circle. He is then asked to draw within two small circles representing the self and a friend; each is labeled. The positioning of the self in the circle is the interpretation.

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[1] Ibid., p. 15. [2] Ibid., p. 16. [3] Ibid., p. 17.

Complexity.--"Complexity in this approach is operationally defined as the selection of a more complex design to represent the self."[1] The testee is asked to select one of three designs which represents the self.

Realism for size.--"A correspondence between the physical self and conception of self is considered to be realistic and may indicate an acceptance of the physical self as opposed to self-dissatisfaction. In relation to size, the concept of realism seems most appropriate for young children, since their size is invariably small when compared to that of adults."[2] In these tasks, an array of circles of three sizes is presented to the child. The testee is first asked to select a circle which represents his father and then another one to be himself. Self-selection is thus always relative to the selection of a symbol for an adult.

Preference for others.--"What is essentially demanded is a response in which the self is (or is not) placed in a category with (or close to) particular other persons."[3] For the preference tasks, two persons from the set are presented to the child. He is asked to place the self within one area or the other.

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[1] Ibid., p. 18. [2] Ibid., p. 19. [3] Ibid.

Reliability

"Reliability means that the procedures measure consistently and uniformly over the duration of the procedure and in a reapplication of the procedure."[1]

The Primary Tests ranged from .47 to .79 with a median of .63 for eight scores.

For the Adolescent Test, split-half coefficients for eleven scores, corrected for length, ranged from .58 to .94, with a median of .82.

In order to answer the statement of the problem, variables were collected. Table 5 represents the list of variables for the primary form.

The investigator selected to calculate the means, standard deviations, and the correlations between the variables listed in Table 5 for the anslysis of the data. Linear multiple regression was selected as the tool for further analysis of the data. Group membership was selected as the criterion and the other variables were used as predictors.

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[1] J. Stanley Ahman, Marvin L. Glock, and Helen L. Wardeburg, Evaluating Elementary School Pupils (Boston: Allyn and Bacon, 1960), p. 59.

TABLE 5

LIST OF VARIABLES PRIMARY FORM

No.	Variable
1	Age - The chronological age was computed in months for each testee at the time of the pre-test examination.
2	Sex - The status of each subject was coded. 1 identified those who were male and 0 those who were female.
3	Group Membership - Group membership was coded 0 for the Control Group and 1 for the Laboratory School.
4	Number of Siblings - Records of each testee were examined to determine any older or younger siblings. The number of siblings were recorded as 0, 1, 2, 3, etc.
5	Birth Order - Records of each testee wer examined to determine the birth order. If testee was an only child, a 1 was recorded. If testee was the second child, a 2 was recorded, etc.
6	Individuation Pre-test - One point is awarded on each item if the testee chooses a symbol which is different from the majority of the symbols within the rectangle. A higher score represents greater individuation or minority identification.
7	Complexity Pre-test - Designs are scored from 1 to 3.
8	Dependency Pre-test - For each item, one point if self is placed within triangle, no points if placed outside.
9	Esteem Pre-test - Scores range from 1 to 6 on each item, with a higher score indicating higher esteem.
10	Realism Size Pre-test - One to three points for circle representing child, from small to large. Higher score represents less realism.

TABLE 5 - Continued

No.	Variable
11	Identification with Mother Pre-test - One point if self is next to other; two points, one circle intervening, etc. Lower score indicates closer relation to other person.
12	Identification with Father Pre-test - One point if self is next to other; two points, one circle intervening, etc. Lower score indicates closer relation to other person.
13	Identification with Teacher Pre-test - One point if self is next to other; two points, one circle intervening, etc. Lower score indicates closer relation to other person.
14	Identification with Friend Pre-test - One point if self is next to other; two points, one circle intervening, etc. Lower score indicates closer relation to other person.
15	Father Preference Pre-test - One point for the stimulus person chosen. Higher score for the person represents more choice of that person.
16	Mother Preference Pre-test - One point for the stimulus person chosen. Higher score for the person represents more choice of that person.
17	Teacher Preference Pre-test - One point for the stimulus person chosen. Higher score for the person represents more choice of that person.
18	Friend Preference Pre-test - One point for the stimulus person chosen. Higher score for the person represents more choice of that person.
19	Individuation Post-test - One point is awarded on each item if the testee chooses a symbol which is different from the majority of the symbols within the rectangle. A higher score represents greater individuation or minority identification.

TABLE 5 - Continued

No.	Variable
20	Complexity Post-test - Designs are scored from 1 to 3.
21	Dependency Post-test - For each item, one point if self is placed within triangle, no points if placed outside.
22	Esteem Post-test - Scores range from 1 to 6 on each item, with a higher score indicating higher esteem.
23	Realism Size Post-test - One to three points for circle representing child, from small to large. Higher score represents less realism.
24	Identification with Mother Post-test - One point if self is next to other; two points, one circle intervening, etc. Lower score indicates closer relation to other person.
25	Identification with Father Post-test - One point if self is next to other; two points, one circle intervening, etc. Lower score indicates closer relation to other person.
26	Identification with Teacher Post-test - One point if self is next to other; two points, one circle intervening, etc. Lower score indicates closer relation to other person.
27	Identification with Friend Post-test - One point if self is next to other; two points, one circle intervening, etc. Lower score indicates closer relation to other person.
28	Father Preference Post-test - One point for the stimulus person chosen. Higher score for the person represents more choice of that person.

TABLE 5 - Continued

No.	Variable
29	Mother Preference Post-test - One point for the stimulus person chosen. Higher score for the person represents more choice of that person.
30	Teacher Preference Post-test - One point for the stimulus person chosen. Higher score for the person represents more choice of that person.
31	Friend Preference Post-test - One point for the stimulus person chosen. Higher score for the person represents more choice of that person.
32	The results of differences between Individuation Pre-test and Individuation Post-test.
33	The results of differences between Complexity Pre-test and Complexity Post-test.
34	The results of differences between Dependency Pre-test and Dependency Post-test.
35	The results of differences between Esteem Pre-test and Esteem Post-test.
36	The results of differences between Realism Size Pre-test and Realism Size Post-test.

CHAPTER IV

ANALYSIS OF THE DATA

The population for this study consisted of children (kindergarten through grade three) from the Laboratory School of the University of Northern Colorado and children (kindergarten through grade three) from a selected school from Greeley School District 6. The analysis of the sub-tests are reported with means and standard deviations.

Table 6 represents the means and standard deviations related to the chronological age of males and females of the population on the pre-test. The means are reported in months.

TABLE 6

MEANS AND STANDARD DEVIATIONS RELATED TO THE CHRONOLOGICAL AGE OF THE POPULATION

Group	Mean	Standard Deviation
Laboratory School	83.090	24.0992
Control Group	85.236	17.2851

From Table 6 it can be noted there is a two-month difference in the ages of the two groups. Greeley School District 6 stipulates that a child must be five years of age on or before September 1 for entrance to Kindergarten. The Laboratory School stipulates that a child must be five years of age on or before September 15.

It can be noted that the Laboratory School is non-graded so there is no or little retention involved.

Individuation, or minority identification, are terms used to describe a single idea--whether the testee thinks of himself as similar to or different from other persons. A high score represents greater individuation or minority identification.

TABLE 7

INDIVIDUATION

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	1.750	0.9679	2.080	1.2283
Control Group	2.101	1.0875	2.090	1.3787

Complexity is operationally defined as the selection of a more complex design to represent the self. It is assumed that, as the child develops and is confronted with an increasing number of diverse other persons, the accumulated comparisons as well as the development of greater intellectual capacity will result in a more complex conception of self. The choice of a more complex design is interpreted as indicating greater complexity for the self.

Table 8 represents the complexity of the two groups of children. Both groups gained in complexity but the Laboratory School children were confronted with three staff teachers, three intern teachers, and specialists in the areas of Physical Education, Music, Drama, Art, and Science. In addition, the Laboratory School children were exposed to eighty observation students per quarter as well as the observation students in the special areas. It appears that the complexity of the self is enhanced by the child's exposure to a diversed group of adults.

TABLE 8

COMPLEXITY

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	8.070	2.3149	8.370	2.0629
Control Group	8.000	1.8091	8.112	1.9682

Social interest or dependency is thought to be the degree to which a person perceives himself as a part of a group of others, as opposed to a perception of the self as an individual. A low social interest implies an isolation of an individual. When a person perceives himself as a part of a group of others, one may assume that he is willing to be responsive to the demands of a group.

Both groups made gains in dependency or social interest (Table 9). It can be seen that the Laboratory School children made greater gains than did the Control Group. It appears that the Laboratory School children had strong group identification and the Control Group children do not appear to have as strong a group identification.

TABLE 9

DEPENDENCY

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	1.910	1.3933	2.540	1.4800
Control Group	2.045	1.3727	2.236	1.4462

Self-esteem is thought to be a person's perception of his worth. Scores range from one to six with a higher score indicating higher esteem.

Table 10 represents the esteem of two groups. It can be noted that the Control Group had a higher self-esteem on the pre-test than did the Laboratory School group. However, the post-test demonstrated a slight gain in self-esteem for the Laboratory School while the Control Group demonstrated a slight loss. It appears the Laboratory School group had an increase in self-esteem over the year.

TABLE 10

ESTEEM

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	32.950	8.1469	33.020	7.8005
Control Group	34.820	8.1108	34.787	8.4201

A correspondence between the physical self and the conception of self is considered to be realistic. In relation to size, the concept of realism seems appropriate for young children since their size is small when compared to adults. The higher score represents less realism.

Table 11 presents an interesting item. The Laboratory School children do not, it appears, to view themselves differently in the relationship of their size to that of an adult. The Control Group appears to be more realistic in the relationship between the physical self and their conception of self.

TABLE 11

REALISM SIZE

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	6.550	4.0586	7.980	2.6323
Control Group	9.640	2.4367	8.584	2.2604

The identification with mother (Table 12) for the Laboratory School group was fairly constant throughout the year. The Control Group had a noticeable shift in closer identification with the mother. The lower score represents closer identification.

TABLE 12

IDENTIFICATION WITH MOTHER

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	7.860	4.2641	7.450	4.3932
Control Group	8.944	5.2275	7.910	4.3292

The post-test of the Laboratory School and the Control Group demonstrated a closer shift to the father than earlier in the year (Table 13).

TABLE 13

IDENTIFICATION WITH FATHER

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	8.540	4.5180	7.850	5.3492
Control Group	9.809	5.8831	7.989	5.5790

Both the Laboratory School group and the Control Group showed less identification with teacher on the post-test than the pre-test (Table 14). However, the Laboratory School children demonstrated a lesser identification with a teacher than did the Control Group. In the Open Space concept at the Laboratory School, the children are exposed to many adults. It appears that they do not particularly identify with anyone particular teacher.

TABLE 14

IDENTIFICATION WITH TEACHER

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	14.010	6.8394	16.320	7.4058
Control Group	13.191	6.4011	14.067	6.9131

Table 15 demonstrates that the Laboratory School children identify with friends less than the Control Group. Table 15 supports the findings of Table 7 (Laboratory School children had greater personalization or individuation) and Table 9 (Laboratory School children had strong group identification). The Control Group was fairly constant throughout the year.

TABLE 15

IDENTIFICATION WITH FRIEND

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	8.980	4.3946	9.300	5.4615
Control Group	10.438	4.8241	10.180	5.6096

It can be seen that a gain was made in preference for father in both groups on the post-test. A forced choice between persons is required. A higher score represents a closer preference for the father (Table 16).

TABLE 16

FATHER PREFERENCE

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	2.150	1.0088	2.390	0.7233
Control Group	2.056	0.9695	2.337	0.7969

The Laboratory School children demonstrated a greater preference for mother than did the Control Group on the post-test (Table 17).

TABLE 17

MOTHER PREFERENCE

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	1.680	0.9088	1.900	0.6890
Control Group	1.775	0.8758	1.764	0.8260

There was less preference for teacher on the post-test for both groups of children (Table 18).

TABLE 18

TEACHER PREFERENCE

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	0.580	0.7808	0.330	0.6365
Control Group	0.865	0.7415	0.685	0.8474

There was less preference for friends on the post-test for both groups of children (Table 19).

TABLE 19

FRIEND PREFERENCE

Group	Pre-Test		Post-Test	
	Mean	Standard Deviation	Mean	Standard Deviation
Laboratory School	1.460	0.8339	1.370	0.7870
Control Group	1.303	0.8582	1.213	0.7609

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The chief purpose of this study was to determine whether any change occurred in the self-concept of children in the open space environment as compared to the change of self-concept of children in a self-contained environment.

Summary of Findings

1. The Laboratory School children had a significant rise in individuation. The Control Group proceeded to have less identification.
2. Both groups gained in complexity. It appears that the complexity of self is enhanced by the child's exposure to a diversed group of adults.
3. Both groups made gains in dependency or social interest. The Laboratory School children had strong group identification and the Control Group children do not have as strong a group identification.
4. The Laboratory School group had an increase in self-esteem over the year while the Control Group demonstrated a slight loss.

5. The Laboratory School children do not view themselves differently in the relationship of their size to that of an adult. The Control Group appears to be more realistic in the relationship between the physical self and the conception of self.
6. The identification with mother for the Laboratory School group was fairly constant throughout the year. The Control Group had a noticeable shift in closer identification with the mother.
7. The post-test of the Laboratory School and the Control Group demonstrated a closer shift to the father than earlier in the year.
8. The Laboratory School children do not identify with any one particular teacher.
9. The Laboratory School children identify with friends less than the children of the Control Group.
10. A gain was made in preference of father in both groups on the post-test.
11. The Laboratory School children demonstrated a greater preference for mother than did the children of the Control Group on the post-test.
12. There was less preference for teacher on the post-test for both groups of children.

13. There was less preference for friends on the post-test for both groups of children.

Conclusions

Grom the data collected, the following conclusions may be drawn:

1. Children in open space have greater identification with the group than the children in self-contained classrooms.
2. Children in open space had an increase in self-esteem while children in self-contained classrooms demonstrated a loss.
3. Children in open space do not view themselves differently in the relationship of their size to that of an adult.
4. Children in open space do not identify with any one particular teacher.

Recommendations

As a result of this study, the following recommendations are being made:

1. Replication of this study in open space concept other than a laboratory school setting.

2. Continued testing of children to determine if the gain of self-esteem in open space is longitudinal in nature.
3. Additional research should be conducted beyond the primary level to determine if a shift in the self-concept occurs.
4. Continued investigation to determine if children in open space do not identify with a particular teacher.

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